2019 Budget Support – Tetra Tech Tasks
Nevada Environmental Response Trust Site
Henderson, Nevada

PREPARED FOR

Nevada Environmental Response Trust
35 E. Wacker Drive, Suite 690
Chicago, IL 60601

PRESENTED BY

Tetra Tech
150 S. 4th Street, Unit A
Henderson, NV 89015

December 21, 2018

TETRA TECH

December XX, 2018

Mr. Jay A. Steinberg
Not individually but solely as President of the Nevada Environmental Response Trust, by and through
Le Petomane XXVII, Inc., not individually but solely as the Nevada Environmental Trust Trustee
35 E. Wacker Drive, Suite 690
Chicago, IL 60601

Mr. Andrew Steinberg
Not individually but solely as Vice President of the Nevada Environmental Response Trust, by and through
Le Petomane XXVII, Inc., not individually but solely as the Nevada Environmental Trust Trustee
35 E. Wacker Drive, Suite 690
Chicago, IL 60601

Mr. Steve Clough
Remediation Director
Nevada Environmental Response Trust
510 S. 4th Street
Henderson, NV 89015

Mr. Brian Loffman
Senior Program Manager
Le Petomane, Inc.
510 S. 4th Street
Henderson, NV 89015

Re: **2019 Budget Support – Tetra Tech Tasks**
Nevada Environmental Response Trust Site
Henderson, Nevada

Dear Messrs. Steinberg, Steinberg, Clough, and Loffman:

At the direction of the Nevada Environmental Response Trust (NERT or Trust), Tetra Tech Inc. (Tetra Tech) has prepared this 2019 Budget Support document which describes select environmental consulting, engineering, and specialty construction services Tetra Tech anticipates performing at the NERT site in Henderson, Nevada (Site). This document is part of a collaborative process in which Tetra Tech will work with the Trust to define work scopes, budgets, and assumptions associated with both the in-progress tasks and continuing tasks to be performed in 2019. The activities described in this document are based on discussions with the Trust and our understanding of the required level of effort.

Tetra Tech will continue to partner with the Trust, Ramboll, and Envirogen Technologies, Inc. (ETI) to identify opportunities that could improve Site operations, reduce Site risks, improve operational efficiencies, and/or reduce costs. As options for improvement are identified, they will be submitted to the Trust under separate cover for

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review and consideration. Tetra Tech will maximize use of local staff and subcontractors and will aggregate on-Site activities for staff traveling to the Site in order to reduce overall costs.

Consistent with Tetra Tech's Master Service Agreement with the Trust, as amended, effective April 7, 2014, work presented within this budget support document will primarily be performed on a Time and Materials basis. Key project assumptions regarding scope, schedule, and the basis of estimate are presented in this document. Tetra Tech understands that the budgets presented herein cannot be exceeded without prior authorization from the Trust and all task contingency budgets are only available if specifically approved by the Trust.

Tetra Tech is pleased to have the opportunity to continue to serve the Trust on this project.

Sincerely,

Dan Pastor Program Manager	Eric Klink Principal	Derek Amidon President, Commercial Account Management Division

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1.0 INTRODUCTION

This document presents the 2019 Budget Support for Tetra Tech Tasks for environmental consulting, engineering and construction services at the Nevada Environmental Response Trust (NERT, or the Trust) site in Henderson, Nevada (Site). The services addressed in this document include on-going support for specific existing and continuing tasks.

Tetra Tech will continue to provide a sustained focus on safety and risk management to protect Site workers, NERT, and the Trust beneficiaries from Site risks. Consistent with Tetra Tech's past performance, we are committed to continuing to provide our project team's unique perchlorate-related qualifications and continually increasing knowledge of the Site history, geology, and environmental contaminant impacts. We are fully prepared and organized to efficiently leverage Tetra Tech's deep bench of engineering, science, and safety professionals to support NERT's desired aggressive implementation schedules and diverse technical needs.

1.1 DOCUMENT STRUCTURE SUMMARY

Each of the subsequent sections of this budget support document describe the category of services to be provided.

- Section 2 describes services for in-progress tasks that will continue in 2019. For these in-progress tasks, unused budget from 2018 will roll over into 2019.
- Section 3 describes services for annual recurring tasks that will continue in 2019 and have new annual budgets or expanded work scopes.
- Section 4 presents detailed budgetary estimates for each task presented in Sections 3.

As directed by the Trust, Section 2 is intended to capture single occurrence type tasks that were not finished in 2018, and for which there is no anticipated change in scope and no budget increase required in 2019 for the existing approved scope. The budget remaining at the end of 2018 will carry over into 2019. These 2019 rollover budgets are estimated based on Q4 2018 cost projections and will be adjusted as appropriate in the first quarter of 2019. In addition to single occurrence type tasks, Section 2 includes tasks where sufficient previously authorized budget remains to support continued activities with no new budget adjustments.

Section 3 includes annual recurring tasks such as security and site inspections (Task F01) where the funding is designed to be renewed annually without the remaining budget rolled-over into the new calendar year. The scope for some annual recurring tasks has been amended and described herein.

Estimated budgets for these tasks follow the format used in previous budgets and include line items for estimated labor and expenses, subcontractors, and contingency. Where appropriate, supporting detailed basis of estimate assumptions are included in Section 4 along with the detailed budgets.

Within each section, the specific tasks to be performed are described. These descriptions include the scope of work for the task, key task schedule milestones, the task budget, and the major assumptions associated with the task. Schedules for in-progress tasks and continuing tasks are based on the master program schedule maintained by the Trust, and the Trust has provided direction enabling Tetra Tech to continue progress without pause for the budget process. Schedules for all tasks are predicated upon 2019 budget approval by February 15, 2019.

The requested work tasks for 2019 are presented below, sorted according to the Trust's budget sections and consistent with the Trust's budget task numbering system.

Task	Task Name	Type and Proposal Section	Initial 2019 Budget
F: General Site Operations			
F01	Security/General Site Inspection	Continuing Task– Section 3	$146,500
F04	Consent Agreement Scheduling and Reporting	Continuing Task– Section 3	$64,000
F05A	Nevada Division of Environmental Protection Relations	Continuing Task– Section 3	$12,000
F05B	Stakeholder Relations	Continuing Task– Section 3	$180,000
G: Leasehold/Off-Site Operations			
G03	EMD Communications and Oversight	Continuing Task– Section 3	$57,500
H: Groundwater Monitoring Program			
H02	Groundwater Monitoring and Field Oversight	Continuing Task– Section 3	$572,000
H08B	Database Management, Maintenance and Accessibility	Continuing Task– Section 3	$80,000
J: GWETS Compliance and Reporting			
J02	Permit Compliance and Reporting	Continuing Task – Section 3	$290,000
J03	GWETS Data Management and Evaluation	Continuing Task – Section 3	$164,000
M: Remedial Investigation Implementation			
M02	Soils Investigation Leasehold Buildings Units 4 and 5	In-Progress Task – Section 2	$7,300
M07	Groundwater Modeling Support	In-Progress Task – Section 2	$74,900
M11	Seep Well Field Area Bioremediation Treatability Study	In-Progress Task – Section 2	$2,182,900
M12	In-Situ Chromium Treatability Study	In-Progress Task – Section 2	$69,900
M13	AP Area Down and Up Flushing Treatability Study	In-Progress Task – Section 2	$102,500
M15	Las Vegas Wash Surface Water Sampling	Continuing Task– Section 3	$237,000
M16	VER Treatability Study Implementation	In-Progress Task – Section 2	$139,800
M17	Galleria Drive Bioremediation Treatability Study	In-Progress Task – Section 2	$357,500
M19	Las Vegas Wash Bioremediation Pilot Study	In-Progress Task – Section 2	$923,500
M21	Unit 4 Source Area In-Situ Bioremediation Treatability Study	In-Progress Task – Section 2	$1,195,150
M26	Hydrogen Gas Permeable Membrane Pilot Study	In-Progress Task – Section 2	$7,000

Task	Task Name	Type and Proposal Section	Initial 2019 Budget
N: Downgradient Study Area Implementation			
N02B	Participation in Regional Tasks	In-Progress Task – Section 2	$45,185
O: Trust Environmental Services			
O05	Services Related to Cost Recovery and Allocation	Continuing Task– Section 3	$37,500
		Total 2019 Budget	$6,946,135

2.0 ROLLOVER BUDGETS FOR IN-PROGRESS TASKS

This section describes the scope of work, schedule, budget, and primary assumptions for tasks which are currently underway but were not completed in 2018, and for which there are no current anticipated changes in work scope or budget. These tasks are anticipated to rollover for completion in 2019, and in some cases will extend into 2020 or beyond. At the direction of the Trust, work in progress at the end of 2018 on the tasks in this section will continue without stoppage or delay in January 2019. Details of each task are described below.

TASK M02 - SOILS INVESTIGATION LEASEHOLD BUILDINGS UNIT 4 AND 5

In 2018, Tetra Tech prepared the Unit 4 and 5 Buildings Investigation Source Area Characterization Report and the Data Validation Summary Report (DVSR).

- The Unit 4 and 5 Buildings Investigation Source Area Characterization Report was revised to address initial Trust comments. Once finalized, this report will be incorporated into the OU-1 and OU-2 RI Report.
- The Unit 4 and 5 Buildings Investigation DVSR documenting the Unit 4 and 5 Buildings Investigation Source Area Characterization data quality was provided by the Trust to NDEP as a standalone report on July 31, 2018. NDEP comments on the DVSR were received on October 30, 2018 with a revised document due to NDEP by January 31, 2019.

In October 2018, the Trust authorized Tetra Tech to complete an additional water level survey of monitoring wells in the general vicinity of Unit 4 to investigate an apparent anomaly in groundwater elevations identified during water level monitoring conducted as part of the Unit 4 Source Area In-Situ Bioremediation Treatability Study pre-design investigation activities. Tetra Tech expects to complete these activities in 2018. The results of the additional water level survey will be incorporated into the Unit 4 and 5 Buildings Investigation Source Area Characterization Report.

Schedule

Per NDEP request, a revised DVSR report for the Unit 4 and 5 Buildings Investigation Source Area Characterization will be submitted as a standalone document by January 31, 2019. The Unit 4 and 5 Buildings Investigation Source Area Characterization Report and final DVSR report will be included as appendices to the OU-1 and OU-2 RI Report scheduled to be submitted in March 2019.

Assumptions

The estimated 2018 spend assumes that the only Task M02 related work completed in December 2018 is related to the additional Unit 4 area water level survey.

Budget

The Trust submitted revised Budget Amendment 18-01 to NDEP on November 30, 2018. Budget Amendment 18-01 included a reallocation of unused budget and contingency from Task M02. To support the budget reallocation, Tetra Tech decreased the previously approved M02 budget including reducing unneeded approved budget and Trust-held contingency. Tetra Tech's adjusted budgets and estimated remaining budget for 2019 are summarized below.

Task	Description	Budget Requested
M02	Trust Approved 2018 Budget	$626,600
	Estimated 2018 Spend [A]	($619,300)
	Budget Rollover to 2019 [B]	$7,300

Notes:
A. Estimated 2018 Spend includes $99,000 adjustment to reconcile the estimated and actual 2017 Spend.
B. Rollover budget is an estimate. The actual budget will not exceed the previously established budget unless amended by the Trust.

TASK M07 - GROUNDWATER MODELING SUPPORT

As directed by the Trust, Tetra Tech will continue to provide peer review of Ramboll's groundwater flow and transport models which are integral to the RI. Based on discussions with the Trust, there are no changes in the work scope and Tetra Tech expects the 2019 activities to be similar to 2018. Tasks may include conducting QA/QC of model input/output files, performing technical review of modeling documents, conducting modeling simulations, attending meetings and conference calls, and providing recommendations on future modeling efforts.

Schedule

The schedule for this task is dependent on the groundwater flow and transport model deliverables produced by Ramboll.

Assumptions

Project assumptions related to Task M07 were presented in the detailed materials presented within the 2017 Trust budget request.

Budget

The 2019 budget for this task is summarized below. Unless otherwise directed by the Trust, it is assumed that this task will continue into subsequent years as new data is generated during the RI.

Task	Description	Budget Requested
M07	Trust Approved 2018 Budget	$78,500
	Estimated 2018 Spend	($3,600)
	Budget Rollover to 2019 [A]	$74,900

Notes:
A. Rollover budget is an estimate. The actual budget will not exceed the previously established budget unless amended by the Trust.

TASK M11 – SEEP WELL FIELD AREA BIOREMEDIATION TREATABILITY STUDY

The purpose of this task is to complete the Seep Well Field (SWF) in-situ bioremediation treatability study and reporting activities in accordance with the NDEP-approved SWF Area Bioremediation Treatability Study Work Plan dated September 6, 2016. The Work Plan was approved by NDEP by letter dated August 3, 2016 but was

subsequently revised to incorporate details and clarifications included in the responses to agency comments. In December 2018 the Trust submitted a treatability study modification (Modification No. 6) to extend the SWF Area Bioremediation Treatability Study in order to evaluate the necessary frequency of long-term carbon donor injections, potential biofouling of the injection wells, and the efficiency of operations and maintenance activities to maintain acceptable injection levels. NDEP approved Modification No. 6 on December 14, 2018.

Tetra Tech initiated treatability study planning and mobilization activities in Q4 2016. In 2017, Tetra Tech performed pre-design and treatability study implementation activities. In 2018, Tetra Tech provided environmental engineering services to continue this treatability study, and in 2019 Tetra Tech plans to complete reporting activities for the in-situ bioremediation treatability study and implement Modification No. 6, as detailed below.

In 2018 Tetra Tech performed the following activities:

- Completed injection events of emulsified oil substrate, amendments, and chase water;
- Performed effectiveness monitoring consisting of monthly groundwater sampling (or slightly adjusted frequency based on effectiveness monitoring results) throughout the remaining duration of the field treatability study;
- Prepared and submitted detailed monthly reporting;
- Initiated preparation of the Seep Well Field In-Situ Bioremediation Treatability Study Report; and,
- Prepared and submitted Treatability Study Modification No. 6.

In 2019, Tetra Tech expects to complete the following activities:

- Prepare and submit the Seep Well Field Area Bioremediation Treatability Study Results Report documenting the activities completed in accordance with the 2016 Work Plan and evaluating the effectiveness of the treatability study in reducing perchlorate-contaminated groundwater in the vicinity of the study area; and
- Implement additional treatability study activities as outlined in NDEP approved Modification No. 6.

Schedule

This treatability study is currently performing as projected in the latest schedule submitted to the Trust in 2018. Tetra Tech completed field activities associated with the original treatability study implementation phase in Q4 2018. Tetra Tech anticipates Trust submittal of a Treatability Study Report to NDEP in Q2 2019 covering the original planned treatability study activities (i.e. not including the activities defined in Modification No. 6). Tetra Tech plans to commence implementation of approved Modification No. 6 activities in Q1 2019.

Assumptions

All project budgetary assumptions for the original treatability work scope were presented in the detailed materials presented within Trust Budget Amendment 2016-02.

Budget

The original implementation budget for the project was authorized with the approval of the Trust Budget Amendment 2016-02. In 2018 Tetra Tech requested and received release of $293,400 of Trust-held contingency in order to proceed with an additional injection event and four additional monitoring events, leaving a remaining Trust-held contingency of $273,600. In December 2018 the Trust provided an additional authorization of $1,839,000 to implement Modification No. 6 for 2019.

Task	Description	Budget Requested
M11	Trust Approved 2018 Budget [A]	$3,929,900
	Estimated 2018 Spend [B]	($1,747,000)
	Budget Rollover to 2019 [C]	$2,182,900

Notes:
A. Trust Amendment 18-01 indicates a budget of $2,090,900. The Trust approved an additional $1,839,000 following submittal of the amendment, for a total of $3,929,900.
B. Estimated 2018 Spend includes $99,000 adjustment to reconcile the estimated and actual 2017 Spend.
C. Rollover budget is an estimate. The actual budget will not exceed the previously established budget unless amended by the Trust. The total amount to rollover to 2019 includes $273,600 in contingency which cannot be utilized by Tetra Tech without specific direction from the Trust.

TASK M12 – IN-SITU CHROMIUM TREATABILITY STUDY

The scope of work for the in-situ chromium treatability study is outlined in the May 25, 2016 In-Situ Chromium Treatability Study Work Plan approved by NDEP on June 28, 2016. In 2018 Tetra Tech completed reporting activities for this task:

- NDEP approved the In-Situ Chromium Treatability Study Results Report on August 3, 2018.
- NDEP accepted the revised DVSR Report on September 20, 2018.
- Tetra Tech provided the Trust a Draft Addendum to the Results Report for internal review.

As directed by the Trust, Tetra Tech revalidated the In-Situ Chromium Treatability Study Addendum data to comply with the latest NDEP data validation guidance.

Tetra Tech anticipates that all Task M12 reporting related activities will be completed in 2018; however final review and approval may roll into 2019.

Schedule

Tetra Tech will diligently respond to comments and complete final reporting in a timely manner following receipt of comments from the Trust and NDEP.

Assumptions

The estimated 2018 spend is based on an assumption that all comments are received and addressed in 2018.

Budget

Task	Description	Budget Requested
M12	Trust Approved 2018 Budget	$161,900
	Estimated 2018 Spend	($92,000)
	Budget Rollover to 2019 [A]	$69,900

Notes:
A. Rollover budget is an estimate. The actual budget will not exceed the previously established budget unless amended by the Trust. The total amount to rollover to 2019 includes $39,700 in contingency which cannot be utilized by Tetra Tech without specific direction from the Trust.

TASK M13 – AP AREA DOWN AND UP FLUSHING TREATABILITY STUDY

In 2018 Tetra Tech completed the AP Area Down and Up Flushing Treatability Study in the former AP production area of the Site to test methods for down flushing high concentration perchlorate zones. Continuing operations in 2018 included:

- Conducted soil flushing system monitoring, maintenance, and operation, including:
  - Performed daily, weekly, and bimonthly monitoring activities;
  - Performed routine maintenance and troubleshooting activities;
  - Performed data validation on analytical data;
  - Provided monthly data sheet including extraction well flow rates, perchlorate concentrations and monthly perchlorate mass removed to the Trust;
- Collected post-flushing confirmation sampling requested by NDEP;
- Operated extraction wells until March 2018;
- Prepared the Treatability Study report; and,
- Provided permit reporting for the associated Water Appropriations and UIC permits.

Tetra Tech is currently addressing comments from NDEP on the treatability study report and DVSR and expects the majority of these activities to be completed before December 31, 2018, as described below:

- AP Area Treatability Study Results Report
  - The Trust provided the report to NDEP on August 1, 2018.
  - NDEP provided comments on October 11, 2018
  - The response to comments and revised report are due to NDEP by December 28, 2018.
- AP Area Treatability Study Results Report – DVSR
  - NDEP provided comments on the DVSR on October 17, 2018
  - Comment responses and report revisions are due to NDEP by January 15, 2019.

Wells installed as part of the AP Area Treatability Study consisted of injection wells, monitoring wells, and extraction wells.

- Injection wells: All injection wells were abandoned in 2018.
- Extraction wells: All extraction wells were transitioned from Tetra Tech to ETI. ETI continues to operate the extraction wells.
- Monitoring wells: The Trust indicated a preference to include the monitoring wells as part of the semi-annual groundwater monitoring activities. These wells remain at the site.

In 2019, Tetra Tech expects to address any remaining comments on the reports and close out Task M13.

Schedule

Tetra Tech will diligently respond to comments and complete final reporting in a timely manner following receipt of comments from the Trust and NDEP.

Assumptions

- Permit reporting associated with the Water Appropriations permit will be due in February 2019. Tetra Tech has relinquished control of the AP Area wells to ETI, thus assumes that all associated permit reporting will be completed by Ramboll who handles Water Appropriations permitting for the Groundwater Extraction and Treatment System (GWETS).

Budget

The remaining rollover budget for this task is summarized below.

Task	Description	Budget Requested
M13	Trust Approved 2018 Budget	$596,500
	Estimated 2018 Spend	($494,000)
	Budget Rollover to 2019 [A]	$102,500

Notes:
A. Rollover budget is an estimate. The actual budget will not exceed the previously established budget unless amended by the Trust.

TASK M16 – VACUUM ENHANCED RECOVERY TREATABILITY STUDY IMPLEMENTATION

In 2017 the Trust authorized Tetra Tech to implement a vacuum enhanced recovery (VER) treatability study. A detailed proposal was submitted to the Trust in September 2017 which was included in the Trust's 2017 Budget Amendment 2017-01. The scope of work is described in detail in the August 23, 2017 Vacuum Enhanced Recovery Treatability Study Work Plan. The VER Treatability Study Work Plan was approved by NDEP on September 18, 2017 with limited comments. In general, the VER treatability study consists of installing VER wells and groundwater monitoring wells, and performing VER testing to evaluate groundwater extraction performance with and without VER.

In 2018 Tetra Tech completed the VER field testing and reporting, as described below:

- VER Treatability Study Results Report
  - The Trust submitted the report and DVSR to NDEP on July 12, 2018.
  - NDEP approved the report with comments for the administrative record on September 7, 2018
- VER Treatability Study DVSR
  - NDEP provided comments on the VER Treatability Study DVSR on September 4, 2018
  - Tetra Tech prepared and the Trust submitted a response to comments and revised DVSR on October 15, 2018.

Tetra Tech is currently completing analytical data validation and a DVSR for a final round of groundwater samples collected in October 2018 at the request of NDEP. Data validation activities will be completed in 2018.

For 2019, Tetra Tech expects to address any remaining comments on the reports and close out Task M13. Tetra Tech will also complete the required Water Appropriations and UIC permit reporting.

Schedule

Tetra Tech will diligently respond to comments and complete final reporting in a timely manner following receipt of comments from the Trust and NDEP.

Budget

Task	Description	Budget Requested
M16	Trust Approved 2018 Budget	$669,800
	Estimated 2018 Spend [A]	($530,000)
	Budget Rollover to 2019 [B]	$139,800

Notes:
A. Estimated 2018 Spend includes $60,000 adjustment to reconcile the estimated and actual 2017 Spend.
B. Rollover budget is an estimate. The actual budget will not exceed the previously established budget unless amended by the Trust. The total amount to rollover to 2019 includes $80,500 in contingency which cannot be utilized by Tetra Tech without specific direction from the Trust.

TASK M17 – GALLERIA DRIVE BIOREMEDIATION TREATABILITY STUDY

The purpose of this task is to complete an in-situ bioremediation treatability study to treat perchlorate in groundwater within the Upper Muddy Creek formation near the OU1/OU2 boundary north of East Galleria Drive. In 2018, laboratory bench-scale studies and pre-design activities (Phase 1) were initiated in accordance with the Galleria Road Bioremediation Treatability Study Work Plan, which was approved by NDEP on October 31, 2017 and Treatability/Pilot Study Modification No. 3 – Galleria Road Bioremediation Treatability Study, which was approved by NDEP on August 29, 2018.

In 2018, Tetra Tech performed the following activities as part of Phase 1:

- Performed geophysical surveys;
- Installed 10 soil borings/monitoring wells;
- Completed groundwater sampling and aquifer testing, consisting of slug testing, borehole dilution testing, and nuclear magnetic resonance (NMR) logging;
- Provided oversight of initial UNLV bench-scale studies;
- Prepared Treatability/Pilot Study Modification No. 3 – Galleria Road Bioremediation Treatability Study;
- Performed step-rate injection tests as part of Treatability/Pilot Study Modification No. 3 – Galleria Road Bioremediation Treatability Study;
- Provided oversight of additional UNLV bench-scale studies as part of Treatability/Pilot Study Modification No. 3 – Galleria Road Bioremediation Treatability Study;
- Prepared and submitted detailed monthly reporting;
- Prepared and submitted the Draft Galleria Drive Bioremediation Treatability Study Work Plan Addendum and associated cost review documentation; and,
- Initiated preparation of a presentation for a Stakeholder's Roundtable.

In 2019, Tetra Tech expects to complete the following activities as part of the Phase 1:

- Continue oversight of UNLV bench-scale studies (if required);
- Finalize the Work Plan Addendum for Phase 2 activities; and
- Prepare and present the final design during a Stakeholder's Meeting.

Following completion and approval of the Galleria Drive Bioremediation Treatability Study Work Plan Addendum, Tetra Tech will prepare a budgetary estimate for Trust approval providing funding to implement Phase 2 of the treatability study in accordance with the approved Work Plan Addendum. Following approval of the additional funding, Tetra Tech expects to complete the following activities in 2019 as part of Phase 2 implementation:

- Complete permitting requirements for treatability study implementation;
- Install injection and monitoring wells required for treatability study implementation;
- Perform baseline groundwater sampling and aquifer testing;
- Perform injection(s) of carbon substrate and amendments;
- Perform periodic effectiveness monitoring to evaluate in-situ bioremediation; and,
- Prepare and submit detailed monthly reporting.

Schedule

This treatability study is currently performing as projected in the latest schedule submitted to the Trust in 2018. Tetra Tech completed field activities associated with the Phase 1 pre-design in Q4 2018 and is on schedule to submit the Draft Galleria Drive Bioremediation Treatability Study Work Plan Addendum in Q1 2019. The schedule of Phase 2 activities to implement the treatability study will be specified in the Work Plan Addendum.

Assumptions

All project budgetary assumptions for the Phase 1 treatability study work scope were presented in the detailed materials presented within the budget authorizations previously provided to the Trust.

Budget

As discussed above, following successful completion of the Phase 1 activities, the Phase 2 treatability study activities (not included in this budget) will be implemented in accordance with the approved Work Plan Addendum. A budget estimate for the Phase 2 scope of work will be developed to implement the approved Work Plan Addendum. The following budget table summarizes the status of the Phase 1 budget.

Task	Description	Budget Requested
M17	Trust Approved 2018 Budget	$1,067,500
	Estimated 2018 Spend	($710,000)
	Budget Rollover to 2019 [A]	$357,500

Notes:
A. Rollover budget is an estimate. The actual budget will not exceed the previously established budget unless amended by the Trust. The total amount to rollover to 2019 includes $61,500 in contingency which cannot be utilized by Tetra Tech without specific direction from the Trust.

TASK M19 – LAS VEGAS WASH BIOREMEDIATION PILOT STUDY

The purpose of this task is to implement an in-situ bioremediation pilot study to reduce the perchlorate mass flux entering the Las Vegas Wash. In 2018, bench-scale studies and pre-design activities (Phase 1) were performed in accordance with the Las Vegas Wash Bioremediation Pilot Study Work Plan, which was approved by NDEP on October 16, 2017 and Treatability/Pilot Study Modification No. 2 – Las Vegas Wash Bioremediation Pilot Study, which was approved by NDEP on August 23, 2018.

In 2018, Tetra Tech performed the following activities as part of Phase 1:

- Installed 48 soil borings/monitoring wells;
- Completed groundwater sampling and aquifer testing, consisting of slug testing, borehole dilution testing, and NMR logging;
- Performed surface water sampling;

- Provided oversight of UNLV bench-scale studies;
- Prepared Treatability/Pilot Study Modification No. 2 – Las Vegas Wash Bioremediation Pilot Study;
- Installed an additional 37 soil borings/monitoring wells as part of Treatability/Pilot Study Modification No. 2 – Las Vegas Wash Bioremediation Pilot Study;
- Completed groundwater sampling and aquifer testing, consisting of slug testing, borehole dilution testing, and NMR logging as part of Treatability/Pilot Study Modification No. 2 – Las Vegas Wash Bioremediation Pilot Study;
- Prepared and submitted detailed monthly reporting; and,
- Initiate preparation of the Draft Las Vegas Wash Bioremediation Pilot Study Work Plan Addendum and associated presentation a Stakeholder's Roundtable.

In 2019, Tetra Tech expects to complete the following activities as part of the Phase 1:

- Complete and submit the Draft Las Vegas Wash Bioremediation Pilot Study Work Plan Addendum, incorporate Trust and NDEP comments, and issue a final document; and
- Prepare and present the final design during a Stakeholder's Meeting.

Following completion and approval of the Las Vegas Wash Bioremediation Pilot Study Work Plan Addendum, Tetra Tech will prepare a budgetary estimate for Trust approval providing funding to implement Phase 2 of the treatability study in accordance with the approved Work Plan Addendum. Following approval of the additional funding, Tetra Tech expects to complete the following activities in 2019 as part of Phase 2 implementation:

- Complete permitting requirements for pilot study implementation;
- Install injection and monitoring wells required for pilot study implementation;
- Perform baseline groundwater sampling and aquifer testing;
- Perform injection(s) of carbon substrate and amendments;
- Perform periodic effectiveness monitoring to evaluate in-situ bioremediation; and,
- Prepare and submit detailed monthly reporting.

Schedule

This pilot study is currently performing as projected in the latest schedule submitted to the Trust in 2018. Tetra Tech completed field activities associated with the Phase 1 pre-design in Q4 2018 and is on schedule to submit the Draft Las Vegas Wash Bioremediation Pilot Study Work Plan Addendum to the Stakeholders in Q1 2019. The schedule of Phase 2 activities to implement the pilot study will be specified in the Work Plan Addendum.

Assumptions

All project budgetary assumptions for the Phase 1 treatability study work scope were presented in the detailed materials presented within the budget authorizations previously provided to the Trust.

Budget

As discussed above, following successful completion of the Phase 1 activities, the Phase 2 treatability study activities (not included in this budget) will be implemented in accordance with the approved Work Plan Addendum. A budget estimate for the Phase 2 scope of work will be developed to implement the approved Work Plan Addendum. The following budget table summarizes the status of the Phase 1 budget.

Task	Description	Budget Requested
M19	Trust Approved 2018 Budget [A]	$3,938,500
	Estimated 2018 Spend	($3,015,000)
	Budget Rollover to 2019 [B]	$923,500

Notes:

A. Trust Amendment 18-01 indicates a budget of $3,287,500. The Trust approved an additional $651,000 following submittal of the amendment, for a total of $3,938,500.

B. Rollover budget is an estimate. The actual budget will not exceed the previously established budget unless amended by the Trust. The total amount to rollover to 2019 includes $50,000 in contingency which cannot be utilized by Tetra Tech without specific direction from the Trust.

TASK M21 – UNIT 4 SOURCE AREA IN-SITU BIOREMEDIATION TREATABILITY STUDY

The purpose of this task is to conduct an in-situ bioremediation treatability study to treat high concentrations of perchlorate and chromium in groundwater in the Unit 4 Source Area. In 2018, laboratory bench-scale studies and pre-design activities (Phase 1) were performed. The scope of work for the Unit 4 Source Area In-Situ Bioremediation Treatability Study is described in the following NDEP approved documents:

- Unit 4 Source Area In-Situ Bioremediation Treatability Study Bench-Scale Work Plan, September 12, 2017;
- Unit 4 Source Area In-Situ Bioremediation Treatability Study Work Plan, Revision 1, February 5, 2018;
- Unit 4 Source Area In-Situ Bioremediation Treatability Study Bench-Scale Work Plan Modification 1, June 28, 2018; and,
- Treatability/Pilot Modification No. 4 - Unit 4 Source Area In-Situ Bioremediation Treatability Study, August 28, 2018

Tetra Tech completed the bench-scale testing work plan in 2017 and bench-scale testing began at UNLV in late 2017. In 2018 Tetra Tech completed the following activities:

- Prepared the Unit 4 Source Area In-Situ Bioremediation Treatability Study Work Plan including revisions to address Trust and NDEP comments;
- Implemented Phase 1, Task 1 pre-design investigation activities in accordance with the approved Treatability Study Work Plan, including:
  - Performed permitting, contingency plan preparation, and utility clearance;
  - Conducted a Geotechnical Investigation and Structural Evaluation;
  - Installed four intermediate injection/extraction wells (90 feet below grade), four deep injection/extraction wells (115 feet below grade), and one dual-nested monitoring well.
  - Completed soil and groundwater sampling and analysis associated with the new wells.
  - Completed slug tests, step-drawdown testing, constant rate pumping tests, and NMR testing at the new wells.
- Based on the initial bench-scale testing data, prepared Modification No.1 to the Bench-Scale Study to expand the bench-scale studies to evaluate the impact of nano-scale zero-valent iron (ZVI) on the reduction of hexavalent chromium and potential improvement of biological reduction of other COPCs with

the addition of organic carbon, evaluate chloroform degradation, and evaluate use of citric acid as a carbon source.
- Provided oversight of UNLV bench-scale studies including both the continuation of the work started in 2017, and implementation of the expanded scope described in Modification No. 1.
- Based on bench-scale testing data that identified high total dissolved solids (TDS) concentrations as an inhibitor to biodegradation, prepared Modification No.4 to the Unit 4 Treatability Study to implement an extended groundwater extraction test to evaluate if short-term groundwater extraction (up to three months) will reduce TDS concentrations to levels at which bioremediation has been successful in the bench-scale testing;
- Designed, implemented, and began operations of the Modification No. 4 extended groundwater extraction testing activities; and,
- Prepared and submitted detailed monthly reporting.

In 2019, Tetra Tech expects to complete the following activities as part of Phase 1:

- Continue coordination and oversight of UNLC bench-scale testing;
- Complete Modification No. 4 extended groundwater extraction testing;
- Work with ETI to determine if the existing chromium treatment plant has adequate capacity to handle the estimated flow and chromium load that could be generated during implementation of the treatability study;
- Prepare the final Unit 4 Source Area In-Situ Bioremediation Treatability Study design;
- Prepare the Unit 4 Source Area In-Situ Bioremediation Treatability Study Work Plan Addendum and associated cost review documents;
- Prepare and present the final design during a Stakeholder's meeting.

Following completion and approval of the Unit 4 Source Area In-Situ Bioremediation Treatability Study Work Plan Addendum, Tetra Tech will prepare a budgetary estimate for Trust approval providing funding to implement Phase 2 of the treatability study in accordance with the approved Work Plan Addendum. Following approval of the additional funding, Tetra Tech expects to complete or initiate the following activities in 2019 as part of the Phase 2 implementation:

- Complete permitting requirements for treatability study implementation;
- Install injection/extraction and monitoring wells required for treatability study implementation;
- Construct aboveground extracted groundwater handling and conveyance structures as described in the final treatability study design;
- Perform baseline groundwater sampling and aquifer testing;
- Initiate operation of the treatability study systems in accordance with the final treatability study design and Work Plan Addendum.
- Perform periodic effectiveness monitoring; and,
- Prepare and submit detailed monthly reporting.

Schedule

This treatability study is currently performing as projected in the latest schedule submitted to the Trust in 2018. Tetra Tech initiated the extended groundwater extraction testing (Modification No. 4) in December 2018 and expects these activities will be completed in Q1 2019. Bench-scale studies are also expected to be complete in Q1 2019. Tetra Tech anticipates finalizing the treatability study design and Unit 4 Source Area In-Situ Bioremediation Treatability Study Work Plan Addendum in Q2 2019. The schedule of Phase 2 activities to implement the treatability study will be specified in the Work Plan Addendum.

Assumptions

All project budgetary assumptions for the Phase 1 treatability study work scope were presented in the detailed materials presented within the budget authorizations previously provided to the Trust.

Budget

As discussed above, following successful completion of the Phase 1 activities, the Phase 2 treatability study activities (not included in this budget) will be implemented in accordance with the approved Work Plan Addendum. A budget estimate for the Phase 2 scope of work will be developed to implement the approved Work Plan Addendum. The following budget table summarizes the status of the Phase 1 budget.

Task	Description	Budget Requested
M21	Trust Approved 2018 Budget [A]	$2,745,150
	Estimated 2018 Spend [B]	($1,550,000)
	Budget Rollover to 2019 [C]	$1,195,150

Notes:
A. Trust Amendment 18-01 indicates a budget of $2,264,650. The Trust approved an additional $480,500 for a total of $2,745,150
B. Estimated 2018 Spend includes $7,900 adjustment to reconcile the estimated and actual 2017 Spend.
C. Rollover budget is an estimate. The actual budget will not exceed the previously established budget unless amended by the Trust. The total amount to rollover to 2019 includes $95,000 in contingency which cannot be utilized by Tetra Tech without specific direction from the Trust.

TASK M26 – HYDROGEN GAS PERMEABLE MEMBRANE PILOT STUDY

The Trust is in the process of evaluating potentially applicable groundwater treatment technologies and remedial alternatives to include as part of the Feasibility Study (FS). Rather than default to an approach that assumes ex-situ groundwater remedial alternatives will rely solely on the existing Fluidized Bed Reactor (FBR) treatment system, the Trust is interested in evaluating other treatment technologies that may be used in lieu of or in conjunction with the FBRs, or as standalone treatment options for specific discrete areas of the groundwater plume. At the direction of the Trust, in 2018 Tetra Tech prepared the Draft Hydrogen-Based Gas Permeable Membrane Technology Pilot Test Work Plan. The Work Plan describes a process for pilot testing hydrogen-based gas permeable membrane technology developed by APT Water, LLC.

In 2018, Tetra Tech completed the Draft Work Plan for Trust review and participated in a technology overview presentation to the Stakeholders. In 2019, Tetra Tech expects to address comments and finalize the Work Plan.

Following approval of the Hydrogen-Based Gas Permeable Membrane Technology Pilot Test Work Plan, a budgetary request will be prepared for Trust approval providing funding to complete the system design and implement the pilot test in accordance with the approved Work Plan. Following approval of the additional funding, Tetra Tech anticipates completing the following design and implementation activities in 2019:

- Finalize selection and complete pilot unit upgrades;
- Complete mechanical, electrical and structural designs for the pilot plant and site improvements;
- Finalize water and solids management strategies, sampling and analytical programs, and the data management plan;
- Identify applicable permits, if any, and initiate permit applications;
- Complete site grading and structural improvements, if necessary;
- Install and troubleshoot the pilot test unit, and finalize operational manual; and,
- Initiate pilot testing operations.

Schedule

The Hydrogen-Based Gas Permeable Membrane Technology Pilot Test Work Plan will be finalized in Q1 2019. The schedule for design and implementation of the pilot test will be dependent upon final approval of the Work Plan and authorization of additional funding by the Trust; however, Tetra Tech expects that the planning, design, and installation of the pilot testing equipment can be completed in Q2 2019, with initial pilot testing operations commencing in Q3 2019.

Assumptions

Tetra Tech has retained sufficient budget to address minor comments from the Trust and NDEP on the Work Plan. If significant revisions to the Work Plan are required based on Trust, NDEP, or Stakeholder input, additional funding will be required.

Budget

The current budget addresses completion of the Work Plan. As discussed above, following approval of the Work Plan, a budgetary request will be prepared for Trust approval providing funding to complete system design and implement the pilot test in accordance with the approved Work Plan.

Task	Description	Budget Requested
M26	Trust Approved 2018 Budget	$60,000
	Estimated 2018 Spend	($53,000)
	Budget Rollover to 2019 [A]	$7,000

Notes:
A. Rollover budget is an estimate. The actual budget will not exceed the previously established budget unless amended by the Trust.

TASK N02B - PARTICIPATION IN REGIONAL TASKS

This task was originally included in the 2016 Trust budget. Activities are to be performed on an as-directed basis, and the Trust did not require any support for this task in 2018; thus, there is adequate budget remaining to rollover to 2019. Tetra Tech will continue to provide support to the Trust on an as-directed basis during performance of the NDEP-led Downgradient RI. These services are anticipated to include the following:

- Providing peer review of preliminary results, technical memoranda, and/or reports prepared by AECOM.
- Attending meetings presenting interim or final results from the Downgradient RI.

Schedule

Work for this task will be performed on an as-directed basis as directed by the Trust.

Budget

Task	Description	Budget Requested
N02B	Trust Approved 2018 Budget	$45,185
	Estimated 2018 Spend	$0
	Budget Rollover to 2019 [A]	$45,185

Notes:
A. Rollover budget is an estimate. The actual budget will not exceed the previously established budget unless amended by the Trust. While it is unknown if any of this budget will be available to rollover into 2020, it should be assumed that this effort will continue.

SUMMARY OF ROLLOVER BUDGETS FOR IN-PROGRESS TASKS

Rollover Budgets for In-Progress Tasks				
Task	**Task Name**	**2018 Trust Approved Budget**	**Estimated 2018 Spend**	**2019 Rollover Budget**
M02	Soil Investigation Leasehold Buildings Units 4 and 5	$626,600	($619,300)	$7,300
M07	Groundwater Modeling Support	$78,500	($3,600)	$74,900
M11	Seep Well Field Area Bioremediation Treatability Study	$3,929,900	($1,747,000)	$2,182,900
M12	In-Situ Chromium Treatability Study	$161,900	($92,000)	$69,900
M13	AP Area Down and Up Flushing Treatability Study	$596,500	($494,000)	$102,500
M16	Vacuum Enhanced Recovery Treatability Study Implementation	$669,800	($530,000)	$139,800
M17	Galleria Drive Bioremediation Treatability Study	$1,067,500	($710,000)	$357,500
M19	Las Vegas Wash Bioremediation Pilot Study	$3,938,500	($3,015,000)	$923,500
M21	Unit 4 Source Area In-Situ Bioremediation Treatability Study	$2,745,150	($1,550,000)	$1,195,150
M26	Hydrogen Gas Permeable Membrane Pilot Study	$60,000	($53,000)	$7,000

Rollover Budgets for In-Progress Tasks				
N02B	Participation in Regional Tasks	$45,185	$0	$45,185
	Total	**$13,919,535**	**($8,813,900)**	**$5,105,635**

3.0 NEW BUDGETS FOR CONTINUING TASKS

Section 3 consists of recurring tasks where the funding is designed to be renewed annually, and any remaining 2018 budget is not carried-over into the new calendar year. Budgets presented in Section 3 generally include a contingency, typically set at 15%, but which can be higher or lower based on Trust direction. Contingency funding can only be utilized by Tetra Tech upon specific direction from the Trust. Budget details and basis of estimate related assumptions are included in Section 4. Budgets for tasks or portions of tasks that are not sufficiently defined to support a detailed estimate are based on an estimated project allocation as directed by the Trust and do not include contingency.

TASK F01 - SECURITY/GENERAL SITE INSPECTION

Task F01 services for 2019 are expected to be similar to the activities completed in 2018 and consist of site security; dust control planning, training, and management; and monthly reading of water meters.

Tetra Tech will provide the following services to NERT under this task:

- Tetra Tech will continue to subcontract and coordinate a security firm to provide security patrols for the Site. The patrols will include two patrols per day at the main plant and one patrol per day at each of the three lift stations. Each patrol will consist of a perimeter security check; an assessment of gates, locks, and fences; and checks for vandalism, theft, property damage or trespassers adjacent to Lake Mead Blvd. Reporting summaries and inspection logs will be prepared and sent electronically to the Trust monthly for the duration of 2019. For early 2019, the planned activities are unchanged from 2018; however, by mid-2019 security activities may be adjusted as additional sale parcels are conveyed to Treco. Funding for security services related to the off-site projects including the SNWA Weir Treatment Plant decommission project, the SWF Area Bioremediation Treatability Study, and the Las Vegas Wash Bioremediation Pilot Study are outside the scope of this budget and provided via task-specific budgets.
- Tetra Tech will continue implementing the non-leasehold NERT Site-Wide Dust Control Plan (DCP) that was prepared and initially implemented in 2015. This includes facilitating NERT Site-wide compliance with the Clark County Air Quality Regulations (AQRs) by identifying specific sources and activities with the highest potential to generate fugitive or airborne dust emissions, and by developing and implementing procedures and management processes that facilitate control of these sources. This also includes the periodic dust control training of contractors and other consultants who are performing minor projects on the property that do not require a formal dust control permit. Weekly inspections and training efforts will be implemented as outlined in the DCP, and the results of such activities will be reported to the Trust monthly for the duration of 2019. An allowance of $15,000 has been included for non-specific dust control measures, such as a water truck and operator when conditions warrant, to comply with Clark County Department of Air Quality (DAQ) AQRs. These activities are unchanged from 2018.
- Tetra Tech will continue to perform monthly readings of the five water meters installed in 2016 along with the three water meters previously installed in the non-leasehold areas of the Trust property and one flowmeter to be installed during restoration of the Stabilized Lake Mead Water line loop. The nine meter readings will be totaled monthly and reported in the monthly task report to provide a more detailed picture of water usage at the site and act as a secondary check of the total consumption of water on the non-leasehold portion of the property. These activities will be similar to the activities in 2018 but will include one additional flow meter in 2019.

Schedule

The activities associated with Task F01 will be implemented continually throughout the year, or as specifically requested by the Trust. Reporting summaries and inspection logs will be sent electronically to the Trust each month for the duration of 2019.

Budget

The requested budget for this task is summarized below. Unless otherwise directed by the Trust, it is assumed that this task will continue into subsequent years with a comparable budget.

Task	Description	Budget Requested
F01	2018 Budget Summary	
	Total Approved 2018 Budget	$146,500
	Estimated 2018 Spend	$65,000 *(44%)*
	New Budget Requested for 2019	
	Tetra Tech Labor and Expenses	$99,000
	Subcontractors	$15,500
	Trust-held Contingency (15%)	$17,000
	Allowance for non-specific dust control	$15,000
	Subtotal	$146,500

TASK F04 - CONSENT AGREEMENT SCHEDULING AND REPORTING

Tetra Tech will continue to track the progress of each project task and submittal of project deliverables against established schedules, modify the task and deliverable schedules as appropriate, and prepare a quarterly cash flow forecast for the Trust. The activities planned for 2019 are identical to 2018. Specifically, this scope of work includes:

- On a monthly basis, reviewing key tasks' Gantt chart schedule and cash-flow forecasts.
- On a quarterly basis, as prompted by the Trust, providing the updated schedule documents to the Trust.
- On a quarterly basis, preparing a 12-month, forward-looking, monthly cash-flow forecast for the Trust that ties to the project schedule and focuses primarily on key tasks, large vendor commitments, and large purchases.

Assumptions

Quarterly schedule updates will include key task items and deliverables but will not provide a detailed itemized schedule for each task.

Budget

The requested budget for this task is summarized below and reflects a small decrease for 2019 based on program efficiencies. Unless otherwise directed by the Trust, Tetra Tech contemplates that this task will continue into subsequent years with a budget commensurate to Tetra Tech's project scope.

Task	Description	Budget Requested
F04	2018 Budget Summary	
	Total Approved 2018 Budget	$78,000
	Estimated 2018 Spend	$55,000 *(71%)*
	New Budget Requested for 2019	
	Tetra Tech Labor and Expenses	$64,000
	Trust-held Contingency (0%)	$0
	Subtotal	$64,000

TASK F05A - NEVADA DIVISION OF ENVIRONMENTAL PROTECTION (NDEP) RELATIONS

This scope of work includes support for various project status update calls with the Trust during 2019. The activities planned for 2019 are similar to 2018. Specifically, this scope of work includes:

- Limited staff time to review and provide comment on the Trust's bi-weekly agenda and participate in bi-weekly calls with the Trust.

Budget

The requested budget for this task is summarized below. Unless otherwise directed by the Trust, Tetra Tech contemplates that this task will continue into subsequent years with a comparable budget.

Task	Description	Budget Requested
F05A	2018 Budget Summary	
	Total Approved 2018 Budget	$16,500
	Estimated 2018 Spend	$10,000 *(61%)*
	New Budget Requested for 2019	
	Tetra Tech Labor and Expenses	$12,000
	Trust-held Contingency (0%)	$0
	Subtotal	$12,000

TASK F05B - STAKEHOLDER RELATIONS

Tetra Tech will provide support for Stakeholder-related events in 2019 consisting of Stakeholder calls, the Annual Stakeholders meeting, and Stakeholder roundtable technical meetings. The scope of work for quarterly Stakeholder calls will remain essentially unchanged from 2018; however, the level of effort associated with the Annual Stakeholders Meeting is expected to be slightly higher to prepare posters, science table presentations, and other visuals and meeting materials. For 2019, the Trust has advised Tetra Tech that three Stakeholder roundtable technical meetings are planned in Las Vegas, Nevada

Specifically, the scope of work for Task F05B includes:

- Prepare for and participate in three quarterly Stakeholder calls.
    - Tetra Tech has budgeted time for up to three staff members to participate in the Stakeholder calls.
- Prepare for, travel to, and participate in the Annual Stakeholders Meeting. Activities will include preparatory meetings with the Trust, subsequent review meetings with NDEP, and presentation to the Stakeholders. Tetra Tech will prepare technical presentations, posters, and science table demonstrations, travel to Henderson to give the presentations at the Annual Stakeholders Meeting, and address follow-up items from the meeting.
    - Tetra Tech has budgeted time and expenses for up to four staff members to prepare for, travel to, and participate in the Annual Stakeholders Meeting.
- Prepare for, travel to, and participate in three Stakeholder roundtable technical meetings.
    - Tetra Tech has budgeted time and expenses for two staff to prepare for, travel to, and participate in the Stakeholder roundtable technical meetings.

Budget

The requested budget for this task is summarized below. Unless otherwise directed by the Trust, Tetra Tech contemplates that this task will continue into subsequent years with a comparable budget.

Task	Description	Budget Requested
F05B	2018 Budget Summary	
	Total Approved 2018 Budget	$120,000
	Estimated 2018 Spend	$120,000 *(100%)*
	New Budget Requested for 2019	
	Tetra Tech Labor and Expenses	$180,000
	Trust-held Contingency (0%)	$0
	Subtotal	$180,000

TASK G03 – EMD COMMUNICATIONS AND OVERSIGHT

Tetra Tech will continue its role assisting the Trust with tenant (contractually identified as EMD formerly Tronox) relations, generally in the form of participation in coordination meetings as well as telephone communication with the Trust, NDEP, and EMD on various maintenance projects that typically arise throughout the year.

For 2018, activities were tracked as four subtasks, originally established in 2017:

- Task1: General Tenant Communication – Work in this category included monthly coordination meetings with EMD and their predecessor, Tronox, and coordination with neighboring properties on general Site issues, as required. In 2018 Tetra Tech incurred approximately $22,500 in charges against this subtask. This effort will continue in 2019.
- Task 2: Tronox Landlord Tenant Construction Agreement (LTCA) Implementation – The LTCA was established in 2012 to provide clarity to tenant obligations with regard to the implementation of projects within the tenant leasehold. The LTCA defined investigation requirements, limitations, and financial responsibilities for tenant repairs, oversight, maintenance, and improvements required in the operation of the facility. Work in this category included inspections associated with LTCA construction projects and will include items such as excavation oversight, work plan review, processing manifests, coordination, and closure reports. In 2018 Tetra Tech incurred approximately $17,000 in charges against this subtask. The LTCA was not assumed by EMD therefore no LTCA oversight efforts are currently anticipated for 2019.
- Task 3: Oversight of Non-Leasehold Water Main Repair – Work in this category included oversight of water line repairs in areas on Trust property outside of the leasehold areas. In 2018 Tetra Tech incurred approximately $5,500 in charges against this subtask. This effort will continue in 2019.
- Task 4: Other Black Mountain Industrial (BMI) Complex Projects – Work in this category has been generally reserved for specific projects that are being implemented on or adjacent to the Trust property by neighboring entities such as TIMET or Olin. When directed by the Trust, Tetra Tech will provide oversight and communications for these activities. In 2018 Tetra Tech incurred approximately $1,000 in charges against this subtask. This effort will continue in 2019.

Schedule

Work will be performed on an as needed basis.

Budget

The requested budget for this task is summarized below. The budget requested for 2019 has been reduced based on elimination of Task 2. Unless otherwise directed by the Trust, Tetra Tech contemplates that this task will continue into subsequent years with a comparable budget.

Task	Description	Budget Requested
G03	2018 Budget Summary	
	Total Approved 2018 Budget	$92,000
	Estimated 2018 Spend	$46,000 *(50%)*
	New Budget Requested for 2019	
	Tetra Tech Labor and Expenses	$50,000

Task	Description	Budget Requested
	Trust-held Contingency (15%)	$7,500
	Subtotal	$57,500

TASK H02 - GROUNDWATER MONITORING AND FIELD OVERSIGHT

Tetra Tech's Task H02 scope of work for 2019 is similar to 2018 and comprised of implementing the groundwater monitoring program in accordance with the 2017 Remedial Performance Groundwater Sampling and Analysis Plan (GWSAP) prepared by Ramboll on behalf of the Trust.

Tetra Tech will continue to implement the Site groundwater monitoring program as the Groundwater Sampling Contractor as defined in the GWSAP. This scope of work includes performing monthly, quarterly, semiannual, and annual groundwater monitoring in and around the Site excluding the operational samples, extraction well samples, and samples for select permits that are the responsibility of the GWETS Operator. All activities will be completed in accordance with the GWSAP.

Under the GWSAP, approximately 1,300 groundwater level measurements will be collected and over 5,500 groundwater analyses will be performed on over 900 groundwater samples during 2019. This includes eight monthly events, two quarterly events (conducted during first and third quarters), one expanded semi-annual event (conducted during fourth quarter), and one expanded annual event (conducted during second quarter). All wells will be sampled via low-flow techniques, if technically viable. Exceptions to low-flow sampling include five artesian wells that are part of the annual sampling event. The artesian wells are sampled in accordance with the procedures described in the GWSAP.

Tetra Tech plans to complete the monthly and quarterly monitoring with Henderson, NV based field staff. The local staff will be supplemented as necessary to complete the larger semi-annual and annual monitoring events in a timely manner. Tasks associated with completing the work include:

- Collecting quality assurance and quality control (QA/QC) samples including field duplicates, field blanks, trip blanks, and equipment blanks.
- Downloading field parameter data at 18 wells with dedicated data transducers to support Ramboll's efforts to develop a more robust data set.
- Submitting copies of completed chain-of-custody forms and copies of field forms to the Trust. Any deviations from the groundwater monitoring program or extraordinary events that may have impacted sampling or results will also be tabulated and provided to the Trust.
- Entering water-level data and field parameter data into Ramboll's electronic data deliverable (EDD) spreadsheets for submittal.
- Developing, permitting, and implementing traffic control plans for wells in public roadways.
- Documenting the general condition of the well riser, lock, cap, casing, and concrete pad on the field sampling forms. Detailed well inspection and well condition reports are not included in this scope of work.

Assumptions

- Approval for limited access to enter properties other than NERT and/or to sample wells owned or permitted by other parties has been adequately secured by the Trust. No provisions have been made to prepare or update access agreements.

- Existing dedicated pumps located in monitoring wells are assumed to be operable and in working order. Tetra Tech has not included costs for maintaining the dedicated pumps, wiring or other existing equipment.
- Tetra Tech understands that the Trust has directed Ramboll to update the GWSAP. The 2019 budget assumes that updates do not have a material impact on estimated costs.

Schedule

The following table summarizes the monitoring schedule for 2019.

Milestone Description	Completion Date
Monthly Water-Level Monitoring	January
First Quarter Monitoring Event	February
Monthly Water-Level Monitoring	March
Monthly Water-Level Monitoring	April
Second Quarter / Annual Monitoring Event	May
Monthly Water-Level Monitoring	June
Monthly Water-Level Monitoring	July
Third Quarter Monitoring Event	August
Monthly Water-Level Monitoring	September
Monthly Water-Level Monitoring	October
Fourth Quarter / Semiannual Monitoring Event	November
Monthly Water-Level Monitoring	December

Budget

The requested budget for this task is summarized below. Tetra Tech identified and implemented task efficiencies resulting in reduced costs in 2018, thus the 2019 requested budget is reduced. However, due to uncertainties associated with possible changes to the GWSAP, and the possible inclusion of additional monitoring wells, Tetra Tech has increased the Trust-held contingency percentage.

Task	Description	Budget Requested
H02	2018 Budget Summary	
	Total Approved 2018 Budget	$597,500
	Estimated 2018 Spend	$450,000 *(75%)*
	New Budget Requested for 2019	
	Tetra Tech Labor and Expenses	$440,000
	Subcontractors	$37,000
	Trust-held Contingency (20%)	$95,000
	Subtotal	$572,000

Note: The total approved budget for 2018 was $637,500; however, the Trust elected to reallocate $40,000 from Tetra Tech to Ramboll, thus Tetra Tech's approved budget for 2018 is $597,500.

TASK H08B – DATABASE MANAGEMENT, MAINTENANCE AND ACCESSIBILITY

Ramboll maintains a site-wide EQuIS database on behalf of the Trust that serves as the primary repository for all site well and analytical data. Tetra Tech maintains an in-house EQuIS database for data Tetra Tech collects during various site activities and makes that data available and accessible to Ramboll to incorporate into the site-wide primary database. Access by Ramboll to the Tetra Tech EQuIS data is maintained through a high availability Azure Structured Query Language (SQL) database through Microsoft SQL Server Management Studio. The primary goal of Tetra Tech's database coordination task is to maintain database linkages and coordination such that the entire NERT dataset is available to the Trust and any other entities with which the Trust wishes to share the data. Tetra Tech anticipates four primary work tasks in 2019:

- Maintain the data management plan – The Trust previously identified a need to prepare a robust data management plan to support efficient management of the large amounts of project data. Preparation of this plan was initiated in 2017 and completed in 2018. As the project evolves, the data management plan will need to be updated. Tetra Tech will work with the Trust and Ramboll to maintain and update the Data Management Plan, as needed.
- Maintain the Tetra Tech in-house database – Tetra Tech will continue to maintain the database for data collected by Tetra Tech.
- Exchange of data with Ramboll - Tetra Tech will continue to exchange data with Ramboll by providing validated data automatically via a shared virtual server which is updated nightly in accordance with the internal Tetra Tech SOPs developed in 2016. Currently these procedures include the following activities:
    - Create the network task folder and add folders for each laboratory sample delivery group;

  - Update the server tracking table created to track the progress of data from the lab through the import process;
  - Process each EDD;
    - Import data into correct folder on the database server;
    - Export Excel flat-files to data validators;
    - Update the database with the validation information (validation qualifiers, validation reason codes and other validation results); and
    - Import and update the database with field information.
  - Run the database update procedure to share the data with Ramboll.
- Quality Assurance Project Plan (QAPP) – Tetra Tech worked with Ramboll in 2018 to update the QAPP to include treatability and pilot studies. Due to new NDEP guidance for data validation and Electronic Data Deliverables, the QAPP will need to be updated again. Tetra Tech will work with Ramboll to update and finalize a new QAPP in 2019.

Assumptions

Assuming new data is generated, the Tetra Tech database will be refreshed nightly.

Budget

The requested budget for this task is summarized below. The 2019 budget is slightly higher than 2018 as Tetra Tech anticipates additional level of effort related to data management. Unless otherwise directed by the Trust, it could be assumed that this task will continue into subsequent years as new data is generated during the RI.

Task	Description	Budget Requested
H08B	2018 Budget Summary	
	Total Approved 2018 Budget	$73,000
	Estimated 2018 Spend	$73,000 *(100%)*
	New Budget Requested for 2019	
	Tetra Tech Labor and Expenses	$80,000
	Trust-held Contingency (0%)	$0
	Subtotal	$80,000

TASK J02 – PERMIT COMPLIANCE AND REPORTING

Tetra Tech's 2019 scope for Task J02 will be consistent with 2018. Tetra Tech will continue to provide permit compliance and reporting support to the Trust in accordance with the compendium document titled *Permit Compliance for the GWETS at the NERT Site in Henderson, Nevada*. In addition, Tetra Tech will continue to include elements of the GW-11 Pond management activities, as well as provide technical support and conduct quarterly inspections for hazardous and nonhazardous waste management at the NERT site not otherwise addressed under specific tasks. Specific Task J02 activities are presented below.

Responsible Entities

Per the aforementioned document, and at the direction of the Trust, permit compliance and reporting responsibilities are distributed across the following three responsible entities:

- Tetra Tech – air, groundwater, dam, holding tank, hazardous and nonhazardous waste
- Ramboll – National Pollutant Discharge Elimination System (NPDES) for the GWETS and SNWA Weir Dewatering Treatment Facilities, UIC, water appropriation
- ETI – hazardous and flammable material related to operation of the GWETS

Tetra Tech, Ramboll, and ETI permit responsibilities are listed in the table below. The table does not include permits obtained to support new initiatives, construction, and/or demolition activities.

Permit	Responsible Entity
Minor Source Air Permit # 17249	Tetra Tech
Groundwater Discharge Permit # NEV2001515	Tetra Tech
Dam Permit # J-665	Tetra Tech
Septic Permits # ON0032461 and # ON0032403	Tetra Tech
Large Quantity Generator ID NVR 000 091 819	Tetra Tech
NPDES Permit # NV0023060	Ramboll
UIC Permit # UNEV94218	Ramboll
Water Appropriation Permits	Ramboll
State Fire Marshal Hazardous Materials Permit # 77591	ETI
Clark County Flammable Combustible Liquids Permit # 44304	ETI
Clark County Hazardous Materials Permit # 44287	ETI
Clark County Hot Works Permit # 44277	ETI
Clark County Liquefied Petroleum Gas Permit # 44290	ETI
Department of the Treasury Industrial Alcohol User Permit # SDS-NV-20004	ETI

Notes:

A. The responsible entity must meet all requirements listed in the *Limitations*, *Monitoring,* and *Reporting* sections of the respective permits.

B. The responsible entity must comply with all fee, revision, and renewal requirements of the respective permits.

C. Tetra Tech will continue to maintain the *Permit Compliance for the GWETS at the NERT Site in Henderson, Nevada*.

D. Tetra Tech will perform on-site compliance reviews quarterly, or as otherwise directed by the Trust

Specific to the permits listed above, Tetra Tech will perform the tasks described below for the air, groundwater, dam, and septic permits, and the LQG status. While there will be variations in the permit-specific activities (e.g. permit renewals), in general, overall anticipated activities planned for 2019 will be similar to those completed in 2018.

Minor Source Air Permit # 17249

The Minor Source Air Permit regulates emissions from the fluidized bed reactor treatment system by limiting flow rates and ethanol usage. Tetra Tech is responsible for preparing the annual permit report. The current minor source air permit expires on March 25, 2023. A permit modification application will be submitted under a separate task to support the Treatment System Extension for treatment of groundwater received from the TIMET property.

Groundwater Discharge Permit # NEV2001515

The Groundwater Discharge Permit regulates the AP-5 and GW-11 Ponds to avoid contamination of groundwater from use of the ponds. Tetra Tech is responsible for preparing quarterly discharge monitoring reports and a detailed fourth quarter summary report due on January 28, 2019. In 2018, Tetra Tech anticipates submitting a request to NDEP-BWPC to remove the recently closed AP-5 Pond from the groundwater permit, with potential for this request and follow up support to extend into 2019.

Dam Permit # J-665

The Dam Permit regulates the GW-11 Pond water impoundment. Tetra Tech is responsible for preparing the annual permit report consistent with the requirements of the permit.

Holding Tank Permits # OW0032461 and # OW0065534

The holding tank permits regulate wastewater holding tanks from the ETI and Trust office trailers at the NERT site. Tetra Tech is responsible for preparing and resubmitting permit applications for these systems annually, consistent with the requirements of the permits. The Trust anticipates enlarging the system serving the Trust trailer in 2019. Tetra Tech will support the request for permit modification to the Southern Nevada Health District.

LQG ID NVR 000 091 819

As a result of the demolition work associated with the Unit 4 component of the NERT RI, the Trust obtained a RCRA ID in 2016 based on its potential to generate more than 2,200 pounds of hazardous waste, or more than 2.2 pounds of acute hazardous waste, per calendar month. Originally, hazardous waste was largely associated with demolition work from the Unit 4 Investigation. In the fourth quarter 2016 and continuing in 2017, hazardous waste also included AP-5 Pond abandoned equipment. Because management of hazardous waste (primarily extracted groundwater from the Unit 4 area having high concentrations of chromium) could continue in 2019, Tetra Tech will perform the tasks listed below.

The Trust directed Tetra Tech to provide technical support and conduct quarterly inspections for hazardous and nonhazardous waste management at the NERT site. The Trust further directed Tetra Tech to provide estimated costs to provide the baseline activities required by the Hazardous Waste Management Plan (HWMP); and include an $80,000 allocation to respond to emergencies, unexpected operational events or special hazardous waste related projects identified by the Trust.

Specifically, Tetra Tech will:

- Update the Permit Compendium Document
- Conduct periodic training for site personnel as required by the HWMP.
- Maintain all documentation as required by the HWMP and/or Resource Conservation and Recovery Act of 1976 including:

- Maintain a site container log (spreadsheet) for the Trust's reference documenting hazardous waste containers, waste collection date, accumulation start date, shipment deadline, manifest number, signed manifest return date, and measured weight.
- Maintain an internal waste stream summary log (spreadsheet) of Tetra Tech-managed hazardous waste documenting the waste description, waste category, location, container, waste characterization, hazardous waste code, sample ID and report number, and disposal facility.
- Assist with reporting for out of state shipment of hazardous waste.

- Conduct quarterly inspections of site hazardous waste management practices and recordkeeping to include internal audit of waste storage, labeling, documentation procedures, storage time limitations, waste profiling, and manifesting.
- Review Trust recordkeeping as part of the quarterly inspections in preparation for NDEP file inspections.
- Review site nonhazardous used oil, universal waste, and special waste management practices as part of the quarterly inspections.
- Communicate findings and recommendations from quarterly inspections to the Trust in action item format. Provide follow-up with the party responsible for compliance to address questions and determine resolution of outstanding issues.

The next LQG biannual report (2-year report) is due March 1, 2020.

GW-11 Pond Management

At the direction of the Trust, Tetra Tech implemented select recommendations from the September 8, 2015 GW-11 Pond Study Elements Summary Report, which was approved by NDEP on November 5, 2015, as on-going tasks related to GW-11 pond management. Specific tasks include the following:

- Audit calculations of primary liner leakage rates and associated graphs prepared by ETI as directed by the Trust.
- Conduct monthly measurement of the groundwater levels (if groundwater is present) in piezometers SB-1, SB-2, and SB-3. Evaluate the results to determine whether the measured water table is increasing, which potentially indicates a leak in the secondary liner.
- Visually inspect on a quarterly basis all portions of the pond liner and earthen structures that are accessible to inspection personnel. Observations will be documented on inspection forms, and any damaged sections of the liner or berms will be identified as requiring repair before their condition impacts the usefulness of the pond.
- Conduct quarterly dye tests in the northeast and northwest sumps. This includes introducing FLT yellow/green dye to the sumps, followed by collecting groundwater samples for visual observation of dye in piezometers SB-1, SB-2, and SB-3 on a weekly basis for 4 weeks. The first sampling event will take place 1 week after the dye injections.

Schedule

Major milestones and anticipated completion dates for this task are summarized in the table below.

Major Milestones	Completion Date
Permit compliance requirements	Specified by permit
Minor Source Air Annual Report	Q1
ETI Trailer Holding Tank Renewal	Q1
Dam Permit Annual Report	Q1
Trust Trailer Holding Tank Renewal	Q4
Audit primary liner leakage rate calculations and graphs prepared by ETI	Bi-weekly, or as otherwise specified by the Trust
Collect water level measurements in piezometers	Monthly
Hazardous waste inspection	Quarterly
Visually inspect pond liner and berms	Quarterly
Conduct dye testing of NE and NW leak detection sumps	Quarterly

Assumptions

For this task, Tetra Tech has assumed:

- New remediation activities initiated in 2019, or amendments to existing remediation activities, may result in new permit requirements that are not included in the current scope of work and may require additional staff time to address, which is not currently included in the task budget.
- Tetra Tech may be requested to review hazardous waste streams and accumulation areas managed by other entities on site, such as Ramboll and ETI. Tetra Tech will make recommendations for compliance communicated directly to the Trust for the Trust's resolution of outstanding issues with the responsible party.
- Tetra Tech will continue to coordinate with the Trust for payment of permit fees.

Budget

The requested 2019 budget for this task is summarized below. As directed by the Trust, an allocation has been included to respond to unexpected operational events or special projects identified by the Trust. It is assumed that similar activities and level of effort will be required in the future and this task will renew in 2020.

Task	Description	Budget Requested
J02	2018 Budget Summary	
	Total Approved 2018 Budget	$310,500
	Estimated 2018 Spend	$200,000 *(64%)*
	New Budget Requested for 2019	
	Tetra Tech Labor and Expenses	$250,000
	Trust-held Contingency (0%)	$0
	Allocation per Trust direction for unexpected operational events	$40,000
	Subtotal	$290,000

TASK J03 – GWETS DATA MANAGEMENT AND EVALUATION

Task J03 services for 2019 are expected to be similar to the activities completed in 2018. Specific work tasks will include:

- Preparing Enhanced Operational Metrics data tables for the December 2018 through November 2019 GWETS Operation Monthly Reports.
- Coordinating with Ramboll during data reviews.
- Performing weekly review and QA/QC checks on ETI's spreadsheets summarizing field measurements including water levels in extraction wells and GW-11.
- Updating and submitting GW-11 volume calculations on a monthly basis.
- Updating the well-specific perchlorate removal worksheet and creating and updating a similar chromium removal worksheet on a monthly basis.
- Verifying ETI's equivalent load worksheet on a semi-annual basis when data is received from ETI.

Schedule

The major milestones and anticipated completion dates for this task are summarized in the table below.

Milestone Description	Completion Date
GW-11 volume calculations	First Business Day of Each Month
Submit draft data tables of GWETS Operations for Trust and ETI review	15th of Each Month
Submit final data tables of GWETS Operations to ETI	20th of Each Month

Milestone Description	Completion Date
Calculate perchlorate removal on a per well basis	Monthly
Verify equivalent load calculation procedures	Semi-annually

Assumptions

All raw data required to prepare the GW-11 volume calculations, monthly report tables, and equivalent load calculations will be provided to Tetra Tech by ETI and the laboratory with adequate lead time to meet the specified completion dates.

The Trust has directed Tetra Tech and Ramboll to review the J03 task activities, notably the procedures related to the ETI spreadsheets. and ensure that the processes are utilizing the improved data available via the GWETS/NET (Task K15) and being completed efficiently. Tetra Tech assumes that any modifications to J03 will result in task efficiency and thus will reduce rather than increase Tetra Tech's estimated 2019 budget.

Budget

The requested budget for this task is summarized below.

Task	Description	Budget Requested
J03	2018 Budget Summary	
	Total Approved 2018 Budget	$164,000
	Estimated 2018 Spend	$145,000 *(88%)*
	New Budget Requested for 2019	
	Tetra Tech Labor and Expenses	$164,000
	Trust-held Contingency (0%)	$0
	Subtotal	$164,000

TASK M15 – LAS VEGAS WASH SURFACE WATER SAMPLING

In June 2017, Tetra Tech began collecting monthly surface water samples at the Las Vegas Wash in accordance with the NDEP approved RI Phase 2 Modification 3. A detailed proposal was submitted to the Trust and included in the Trust's 2017 Budget Amendment 2017-01 which was subsequently approved by NDEP.

Consistent with the indicated RI Modification, Tetra Tech completed initial task planning activities and coordination with Ramboll and the USGS, completed seven monthly sampling events (June through December) and completed two semi-annual sampling events (June and December) in 2017. Consistent with the NDEP approved work plan, Tetra Tech continued these activities in 2018.

For 2018, Tetra Tech completed 12 monthly sampling events and 2 semi-annual sampling events. The semi-annual sampling events were conducted in coordination with USGS as part of their groundwater seepage study. The scope of work for 2018 was periodically adjusted based on Trust direction, Ramboll data evaluation and resulting suggested modifications, and/or access limitation issues associated with on-going construction of the two new Las Vegas Wash weirs and property access restrictions. In addition, two RI modifications relevant to surface water sampling were approved in 2018: Modification No. 10 (dated February 26, 2017 as modified by NDEP's comments on May 2, 2018), and Modification No. 14 (dated September 10, 2018).

The scope of work for 2019 is expected to be similar to 2018, with the exception that there will be no semi-annual sampling events as the last USGS study sampling event was completed in June 2018. Surface water samples will be collected each month at the following locations per RI Phase 2 Modification No. 3, Modification No. 10, and Modification No. 14:

Table 1. Summary of Monthly Surface Water Sampling

USGS Stream Gages	NERT Sampling Location	Notes
Las Vegas Wasteway	LVW 8.85	Single sample downstream location
Duck Creek Confluence	LVW 7.2	Single sample upstream location
Between Upper Narrow Weir and Sunrise Mountain Weir	LVW 6.6	3 sample transect
Pabco Road	LVW 6.05	Single sample location
C-1 Channel[A]	C-1 Chan #1 C-12 Chan #2	3 samples and flow velocity measurements at culvert
Bostick Weir	LVW 5.3	6 sample transect
Calico Ridge Weir	LVW 4.75	5 sample transect downstream location
Homestead Weir	LVW 4.2	4 sample transect
Three Kids Weir	LVW 3.5	6 sample transect
Northshore Road	LVW 0.55	Single sample transect

Notes:
A. The C-1 Channel location does not have a USGS stream gage.

Schedule

Sampling will occur monthly. Tetra Tech will attempt to plan and implement the sampling consistently from month to month; however, the timing of the sampling event each month may vary depending upon weather and field schedule conflicts.

Budget

The requested budget for this task is summarized below. Tetra Tech's budget for 2019 reflects the elimination of the semi-annual sampling events and efficiencies realized through project implementation in 2018.

Task	Description	Budget Requested
M15	**2018 Budget Summary**	
	Total Approved 2018 Budget	$347,000
	Estimated 2018 Spend	$180,000 *(52%)*
	New Budget Requested for 2018	
	Tetra Tech Labor and Expenses	$179,000
	Subcontractors	$27,000
	Trust-held Contingency (15%)	$31,000
	Subtotal	$237,000

TASK O05 – SERVICES RELATED TO COST RECOVERY AND ALLOCATION

Tetra Tech will continue to provide consulting assistance to the Trust for the compilation of project costs related to chlorate or perchlorate to support the Trust's submittal to the United States Department of Defense (USDOD) of the Eighth Payment Demand for response costs pursuant to the 2006 Henderson Consent Decree and Substitution and Clarification Agreement. In addition, Tetra Tech will provide consulting assistance to the Trust for the preparation of responses to USDOD questions and comments on the previously submitted payment demands, if required.

The activities planned for 2018 were expected to be similar to 2017; however, the Trust opted to reallocate some of Tetra Tech's activities to Foley and Lardner, LLP, thus Tetra Tech's level of effort for 2018 was significantly less than budgeted. Tetra Tech's scope of work for 2019 is expected to be similar to 2018, and the requested budget has been reduced accordingly.

Assumptions

Tetra Tech has assumed the level of effort required to prepare the reimbursement package for 2018 will be greater than that required for the 2017 reimbursement package based on the increased treatability study activity. The budget may need to be modified if significant comments or questions are received from USDOD.

Budget

The requested budget for this task is summarized below. Unless otherwise directed by the Trust, Tetra Tech contemplates that this task will continue into subsequent years with a budget commensurate to Tetra Tech's project scope.

Task	Description	Budget Requested
O05	2018 Budget Summary	
	Total Approved 2018 Budget	$70,000
	Estimated 2018 Spend	$20,000 *(29%)*
	New Budget Requested for 2019	
	Tetra Tech Labor and Expenses	$30,000
	Trust-held Contingency (25%)	$7,500
	Subtotal	$37,500

SUMMARY OF NEW BUDGETS FOR CONTINUING TASKS

New Budgets for Continuing Tasks				
Task	**Task Name**	**2018 Approved Budget**	**Estimated 2018 Spend**	**2019 Requested Budget**
F01	Security/General Site Inspection	$146,500	$65,000	$146,500
F04	Consent Agreement Scheduling and Reporting	$78,000	$55,000	$64,000
F05A	Nevada Division of Environmental Protection Relations	$16,500	$10,000	$12,000
F05B	Stakeholder Relations	$120,000	$120,000	$180,000
G03	EMD Communications and Oversight	$92,000	$46,000	$57,500
H02	Groundwater Monitoring and Field Oversight	$597,500	$450,000	$572,000
H08B	Database Management, Maintenance, and Accessibility	$73,000	$73,000	$80,000

New Budgets for Continuing Tasks				
J02	Permit Compliance and Reporting	$310,500	$200,000	$290,000
J03	Data Management and Evaluation	$164,000	$145,000	$164,000
M15	Las Vegas Wash Surface Water Sampling	$347,000	$180,000	$237,000
O05	Services Related to Cost Recovery and Allocation	$70,000	$20,000	$37,500
	Total	**$2,015,000**	**$1,364,000**	**$1,840,500**

4.0 DETAILED BUDGETS

Reserved for detailed budgets for Continuing Tasks (Section 3)